

Exercise Therapy

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Antalgic Gait

Definition

Antalgic gait is an abnormal, self-protective gait pattern adopted to reduce pain during walking. It commonly occurs following injury or painful conditions affecting the pelvis, hip, knee, ankle, or foot.

Antalgic gait: The stance phase on the affected limb is shortened, and the patient quickly transfers weight to the unaffected limb.

Causes

- Injury or trauma to the lower limb.
- Osteoarthritis of the hip or knee.
- Fractures involving the lower limb or pelvis.
- Inflammatory joint conditions.
- Painful conditions affecting the ankle or foot.
- Postoperative pain following lower-limb surgery.
- Gait characteristics
- Shortened stance phase on the affected limb.
- Reduced weight bearing on the painful limb.
- Reduced step length of the unaffected limb.
- Decreased walking speed and cadence.
- Asymmetrical gait pattern.
- Reduced push-off from the affected limb when pain limits movement.
- The patient may support the painful region with one hand, if accessible.
- The opposite arm may be outstretched to maintain balance.

Functional problems

- Difficulty walking for prolonged periods.
- Reduced walking speed and endurance.
- Difficulty climbing stairs.
- Difficulty standing on the affected limb.
- Reduced participation in daily activities.
- Increased energy expenditure due to asymmetrical walking.

Joint Movements During Gait: Sagittal, Frontal and Transverse Plane Motions

Gait Cycle Phases

Determinants of Gait

Gait Analysis: Definition, Spatial and Temporal Variables

Gait Cycle: Definition, Phases and Gait Analysis with Diagrams

Human Gait

Reference:

1. O'Sullivan SB, Schmitz TJ, Fulk GD. Physical Rehabilitation. Elsevier.
2. Magee DJ. Orthopedic Physical Assessment. Elsevier.

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